

**NATURAL RESOURCES CONSERVATION SERVICE**  
**CONSERVATION PRACTICE SPECIFICATION**

**WATERING FACILITY**

(no.)  
**CODE 614**

**SCOPE**

The work shall consist of furnishing materials and constructing a water tank and/or a watering trough with appurtenances to the dimensions and elevations as shown on the drawings or as staked in the field. Construction shall be in accordance with the plans and these specifications.

**INSTALLATION**

**Building permit.** Plans shall be noted that a building permit may be required for tanks and tank sheds, and is the responsibility of the owner or user to obtain the required permits from the appropriate agencies.

**Site preparation.** The foundation area for the trough or tank shall be cleared of material not suitable for the subgrade. The foundation area and the immediate surrounding area shall be graded and smoothed to permit free drainage of surface water. All backfill for underground pipes shall be compacted to the degree required to prevent settlement after construction is completed.

**Materials and workmanship.** All materials, placement, anchoring, proportioning and protection shall be as shown on the plans.

**Reinforced concrete.** For small jobs, the concrete mix will be: 1 sack cement (1 cubic foot), 2 cubic feet sand, 3-1/2 cubic feet gravel and 6 gallons water. For larger jobs, concrete will be proportioned and mixed to produce a 28-day strength of 3,000 pounds per square inch or greater. Concrete shall be cured by keeping exposed surfaces wet for a minimum of 7 days or by applying an acceptable curing compound. Reinforcing steel is to be placed as indicated on the plans and held securely in place during concrete placement. Subgrades and forms are to be installed to lines and grades and the forms are to be mortar-tight and unyielding as the concrete is placed.

All concrete shall be vibrated or rodded in the forms. Concrete surfaces shall be finished to where no voids, honeycombed areas, rough edges or obstructions exist.

The bond area between a floor slab and reinforced concrete wall shall be thoroughly roughened and cleaned to insure a good bond.

**Concrete masonry (hollow-tile block).** Mortar for concrete masonry shall be freshly prepared and uniformly mixed in a ratio by volumes of 1 part cement, 1/2 part lime putty, and 4-1/2 parts sand. If plastic-type cement is used, the lime putty shall be omitted.

Grout for the cells of concrete hollow-tile blocks shall be of fluid consistency and mixed in the ratio by volumes, 1 part cement, 3 parts sand; or 1 part cement, 3 parts sand, and 2 parts pea gravel.

**Corrugated metal sheets.** The base ring of the tank should be assembled directly on the base material. Vertical joints of the section plates of the second tank ring shall be positioned approximately above the center of the section plates of the bottom tank ring. This staggering of the section plates shall be followed throughout the tank construction. Connections shall be the bolt and washer on the inside of the tank and the nut on the outside.

**Workmanship.** All construction shall be performed in a workmanlike manner, and the job site shall have a neat appearance when finished.

The flat bottoms and top edges of tanks and troughs shall be level.

All disturbed areas not graveled or paved will be vegetated to control erosion.

## **CONSTRUCTION OPERATIONS**

Construction operations shall be carried out in such a manner and sequence that erosion and air and water pollution are minimized and held within legal limits.

The owner, operator, contractor or other persons will conduct all work and operations in accordance with proper safety codes for the type of construction being performed with due regards to the safety of all persons and property.

## **SAFETY**

Landowners or operators, sponsoring organizations, and contractors shall be liable for damage to utilities and damage resulting from disruption of service caused by construction activities. The Natural Resources Conservation Service makes no representation on the existence or non-existence of any utilities. Absence of utilities on the drawings is not assurance that no utilities are present at the site.

It is the responsibility of the landowner or operator to determine if there are buried or overhead utilities in the vicinity of the proposed work. They should take proper procedures to insure that the utilities shall not be jeopardized and that equipment operators and others will not be injured during construction operations.